



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/576,881

04/21/2006

Masaya Yukinobu

060284

5810

23850 7590 07/23/2008
KRATZ, QUINTOS & HANSON, LLP
1420 K Street, N.W.
Suite 400
WASHINGTON, DC 20005

EXAMINER

CHU, CHRIS C

ART UNIT

PAPER NUMBER

2815

MAIL DATE

DELIVERY MODE

07/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,881	Applicant(s) YUKINOBU, MASAYA	
	Examiner CHRIS C. CHU	Art Unit 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 17 is/are pending in the application.
- 4a) Of the above claim(s) 9 - 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 3, 6 and 7 is/are rejected.
- 7) ☒ Claim(s) 4,5,8,16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/21/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (claims 1 – 8, 16 and 17) in the reply filed on May 2, 2008 is acknowledged.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following limitation “a transparent coat layer formed by coating between i) said auxiliary electrode layer and said transparent conductive layer at its areas standing not covered with said pattern-shaped auxiliary electrode layer and ii) said adhesive layer” in claim 5 must be shown or the feature(s) canceled from the claim(s) because the Fig. 4 of instant invention shows the transparent coat layer 6 covers the entire area between the adhesive layer and the layers (2 and 3). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency.

Art Unit: 2815

Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(A) Claim 5, it is not clear what applicant regards as "a transparent coat layer formed by coating between i) said auxiliary electrode layer and said transparent conductive layer at its areas standing not covered with said pattern-shaped auxiliary electrode layer and ii) said adhesive layer". Specifically, the limitation "said auxiliary electrode layer and said transparent conductive layer at its areas standing not covered with said pattern-shaped auxiliary electrode layer" is not clear because the coated area could be the non-patterned auxiliary electrode layer on the transparent conductive layer or the entire area of the said auxiliary electrode layer and said transparent conductive layer. Thus, the claim is not clear.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 – 3 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Su et al. (U. S. Pat. No. 6,621,215).

Regarding claim 1, Su et al. discloses in e.g., Fig. 5A a transparent conductive multi-layer structure (the structure in e.g., Fig. 5A) which comprises

- a smooth base material (since the element 45 of Su et al. has a smooth surface, the element 45 read as the smooth base material; column 5, line 6 and see e.g., Fig. 5A),
- a transparent conductive layer (54; column 7, lines 21 – 23) formed on the smooth base material (see e.g., Fig. 5A),
- an auxiliary electrode layer (52; column 6, line 8) formed in a pattern on the transparent conductive layer (54; see e.g., Fig. 5A), and
- a transparent substrate (42; column 4, line 67) joined to the transparent conductive layer (54) and auxiliary electrode layer (52) through an adhesive layer (43; column 6, lines 16 – 24 and see e.g., Fig. 5A).

Furthermore, the limitations “by coating” is product-by-process limitation. Even though product-by-process claim is limited by and defined by the process, determination of patentability is based upon the product itself. The patentability of a product does not depend on its method of production. If the product in product-by-process claim is the

Art Unit: 2815

same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product is made by a different process. In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted). A “product by process” claim is directed to the product per se, no matter how actually made, In re Hirao, **190 USPQ 15 at 17** (footnote 3). See also In re Brown, **173 USPQ 685**; In re Luck, **177 USPQ 523**; In re Fessmann, **180 USPQ 324**; In re Avery, **186 USPQ 116**; In re Wertheim, **191 USPQ 90 (209 USPQ 254** does not deal with this issue); and In re Marosi et al., **218 USPQ 289** final product per se which must be determined in a “product by, all of” claim, and not the patentability of the process, and that an old or obvious product, whether claimed in “product by process” claims or not. Note that Applicant has the burden of proof in such cases, as the above caselaw makes clear. Even further, the limitation “the smooth base material being peelable from the transparent conductive layer” is functional limitation which does not differentiate the claimed structure over Su et al. because the smooth base material 45 of Su et al. is conceivably able to peel from the transparent conductive layer 54.

Regarding claim 2, Su et al. discloses in e.g., Fig. 3A and Fig. 5A said auxiliary electrode layer (52) having a pattern in the shape of a lattice, the shape of a mesh, the shape of a honeycomb, the shape of parallel lines (the shape of the elements 52 under the elements 46 in e.g., Fig. 3A) or the shape of the teeth of a comb.

Regarding claim 3, Su et al. discloses in e.g., Fig. 5A said auxiliary electrode layer (52) comprising at least one selected from fine metal particles (column 7, lines 50 – 58), fine carbon particles and fine ruthenium oxide particles, or at least one selected from fine metal particles, fine carbon particles and fine ruthenium oxide particles and a binder component.

Art Unit: 2815

Regarding claim 7, Su et al. discloses in e.g., Fig. 5A said transparent conductive layer (54) having been subjected to rolling to make the conductive fine oxide particles dense (column 7, lines 21 – 23). Furthermore, the limitation “subjected to rolling to make the conductive fine oxide particles dense” is intended use language which does not differentiate the claimed structure over Su et al. because the transparent conductive layer of Su et al. is capable to roll the transparent conductive layer to make the conductive fine oxide particles dense even if it is not optimized for this purpose.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Su et al. in view of Seo (U. S. Pub. No. 2003/0,215,651).

While Su et al. discloses the transparent conductive layer comprising conductive fine oxide particles. Su et al. does not disclose average particle diameter being from 1 to 100 nm. Seo teaches in e.g., page 2, paragraph 0021, lines 1 – 9 a transparent conductive layer (the conductive layer) comprising conductive fine oxide particles of from 1 to 100 nm in average particle diameter and a binder component (page 2, paragraph 0021, lines 7 – 9). It would have been obvious to one of ordinary skill in the art at the time when the invention was made to apply the average particle diameter of Seo as the specific diameter to form the oxide particles of Su et al. as taught by Seo to prevent oxidation of the metal

Art Unit: 2815

oxide in the conductive layer and enhance the reducibility of the metal oxide (page 2, paragraph 0028, lines 19 and 20).

Allowable Subject Matter

9. Claims 4, 5, 8, 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(A) Claim 4 contains allowable subject matter because none of references of record teach or suggest, either singularly or in combination, at least the limitation of a first auxiliary electrode layer comprising at least one selected from fine carbon particles, fine ruthenium particles and fine ruthenium oxide particles and a binder component, and a second auxiliary electrode layer comprising fine metal particles and a binder component.

(B) Claim 5 contains allowable subject matter because none of references of record teach or suggest, either singularly or in combination, at least the limitation of a transparent coat layer formed by coating between i) said auxiliary electrode layer and said transparent conductive layer and ii) said adhesive layer.

(C) Claim 8 contains allowable subject matter because none of references of record teach or suggest, either singularly or in combination, at least the limitation of an adhesive layer being mixed with at least one additive selected from an ultraviolet absorber, a dehydrating agent and a deoxidizer.

(D) Claim 16 contains allowable subject matter because none of references of record teach or suggest, either singularly or in combination, at least the limitation

Art Unit: 2815

of a smooth base material having been peeled off to have a transparent conductive layer and an auxiliary electrode layer which are joined to a transparent substrate through an adhesive layer.

(E) Since claim 17 is a dependent claim of objected claim (claim 16), this claim is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims (e.g., claim 16).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cok et al., Ando et al., Ahn et al., Sugino et al., Kim et al., Sunohara et al., Ogura et al., Arai et al. and Inoguchi et al. disclose the electroluminescent device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRIS C. CHU whose telephone number is (571)272-1724. The examiner can normally be reached on 11:30 - 8:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Parker can be reached on 571-272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 2815

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Chris C. Chu
Primary Examiner
Art Unit 2815

/Chris C. Chu/
Primary Examiner, Art Unit 2815
Sunday, July 20, 2008